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Quality Engineering Test Report

SERIES: S-25 25W AC-DC SINGLE OUTPUT SWITCHING POWER SUPPLY

SAMPLE: A. S-25-5 5V / 5A
B. S-25-12 12V / 2.1A
C. S-25-15 15V / 1.7A
D. S-25-24 24V /1.1A

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:85~264VAC O/P:FULL LOAD	A : 53VAC~267VAC	P
2	LINE REGULATION	I/P:85~264VAC SPEC: A: ±0.5% B: ±0.5% O/P:FULL LOAD C: ±0.5% D: ±0.5%	A: 0%~ 0% B: 0%~ 0% C: 0%~ 0% D: 0%~ 0%	P
3	LOAD REGULATION	I/P:230VAC SPEC: A: ±1% B: ±0.5% O/P:MIN. TO FULL LOAD C: ±0.5% D: ±0.5%	A: -0.24%~ +0.24% B: -0.05%~ +0.10% C: -0.08%~ 0% D: -0.02%~ +0.02%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:85~264VAC SPEC: A: ±2% B: ±1% O/P:0% TO FULL LOAD C: ±1% D: ±1%	A: -0.38%~ +0.12% B: -0.15%~ +0.06% C: -0.13%~ +0.04% D: -0.03%~ +0.08%	P
5	RIPPLE&NOISE	I/P:230VAC SPEC: A: 50mV B: 100mV O/P:FULL LOAD C: 100mV D: 100mV	A:23mV B:10mV C:12mV D:20mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC: 0.35A O/P:FULL LOAD	A : 0.33A	P
7	MAX. INRUSH CURREN	I/P:230VAC SPEC: 30A O/P: FULL LOAD	A : 27A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC SPEC: A: -5%~+10% O/P:MIN. LOAD B: ±10% C: ±10% D: ±10%	A:4.53V~5.81V B:9.78V~14.73V C:12.48V~17.52V D:18.55V~27.20V	P
9	SET UP TIME	I/P:230VAC SPEC:300mS O/P:FULL LOAD	A: 223mS	P
10	HOLD UP TIME	I/P:230VAC SPEC:80mS O/P:FULL LOAD	A: 95.8mS	P
11	EFFICIENCY	I/P:115VAC SPEC: A:72% B:76% O/P:FULL LOAD C:77% D:80%	A:73.45% B:78.33% C:78.59% D:80.73%	P
12	OVER LOAD PROTECTION	I/P:230VAC SPEC: 105%~150% O/P:TESTING	A:137% B:145% C:140.5% D:132%	P
13	OVER VOLTAGE PROTECTION	I/P:230VAC SPEC: 115%~135% O/P:TESTING	A:123.6% B:123% C:123.6% D:118.6%	P
14	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG--<0.75mA N-FG--<0.75mA	A: L-FG:0.42mA N-FG:0.42mA	P
15	INSULATION RESISTANCE	SPEC: I/P-O/P: 500VDC/100M Ohms MIN. I/P-FG : 500VDC/100M Ohms MIN. O/P-FG: 500VDC/100M Ohms MIN.	A: O/P-FG >100M Ohms I/P-O/P >100M Ohms I/P-FG >100M Ohms	P

NEXT

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>TEST CONDITION / SPECIFICATION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>16</td><td>DIELECTRIC / WITHSTAND VOLTAGE</td><td>SPEC: I/P- O/P: 3.0KVAC/ 1 min. (10mA CUT-OFF)
I/P - FG: 1.5KVAC/ 1 min. (10mA CUT-OFF)
O/P -FG: 0.5KVAC/ 1 min. (10mA CUT-OFF)</td><td>A: I/P-O/P :2.43mA
I/P-FG :2.46mA
O/P-FG :2.56mA</td><td>P</td></tr>
<tr><td>17</td><td>EMS TEST</td><td>EFT TEST:
EN50082-1 IEC1400-4-4</td><td>D: CRITERIA A OK</td><td>P</td></tr>
<tr><td></td><td></td><td>SURGE TEST:
EN50082-1 IEC1400-4-5</td><td>D: CRITERIA A OK</td><td>P</td></tr>
<tr><td>18</td><td>BURN-IN TEST</td><td>I/P: 230VAC O/P: FULL LOAD
TA:23°C BURN-IN DURATION : 1 hr</td><td>A : NON BREAK</td><td>P</td></tr>
<tr><td>19</td><td>ENVIRONMENT TEST</td><td>HIGH AMBIENT TEMPERATURE FULL LOAD TEST
I/P:230VAC O/P:FULL LOAD
AMBIENT TEMPERATURE:42.5°C</td><td>A: AFTER 5hrs
NON BREAK</td><td>P</td></tr>
<tr><td>20</td><td>TEMPERATURE RISE TEST T rise OF PARTS</td><td colspan="2">A: I/P :230VAC AFTER 1 hr BURN-IN
O/P :FULL LOAD TA:23°C
<table>
<tr><th>POSITION</th><th>P/N</th><th>TEMP</th><th>T rise</th></tr>
<tr><td>BD1</td><td>BRIDGE DIODE</td><td>56.6°C</td><td>33.6°C</td></tr>
<tr><td>Q1</td><td>MAIN TRANSISTOR</td><td>61.6°C</td><td>38.6°C</td></tr>
<tr><td>T1</td><td>MAIN TRANSFORMER WIRE</td><td>72.4°C</td><td>49.4°C</td></tr>
<tr><td>D4</td><td>O/P DIODE</td><td>89.2°C</td><td>66.2°C</td></tr>
<tr><td>C21</td><td>O/P FILTER CAPACITOR</td><td>79°C</td><td>56°C</td></tr>
<tr><td>LF1</td><td>LINE FILTER TRANSFORMER</td><td>49°C</td><td>26°C</td></tr>
<tr><td>C5</td><td>I/P FILTER CAPACITOR</td><td>56.8°C</td><td>33.8°C</td></tr>
</table></td><td>P</td></tr>
<tr><td>21</td><td>LIFE CYCLE</td><td colspan="2">A: SUPPOSE C21 IS THE MOST CRITICAL COMPONENT
I/P:230VAC O/P:FULL LOAD Ta:25°C Tc21:81°C Life: 26026 hrs
I/P:230VAC O/P:FULL LOAD Ta:45°C Tc21:100.9°C Life: 6552 hrs</td><td>P</td></tr>
<tr><td>22</td><td>CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)</td><td colspan="3">A: FUSE : 3AL/250V
BRIDGE DIODE : LTKBP208G
LINE FILTER : TF-207-R3
TRANSFOMER : TF-228-1-R1 EER-28
POWER SWITCHER : 2SK1118 TO-220F
OUTPUT DIODE : CTB-24L TO-220
OUTPUT CAPACITOR : ELNA 2200uF/10V 105°C RJH
INPUT CAPACITOR : HITACHI 68uF/400V 85°C HP3
P.C.B : S-25N-R5 CEM-1 2 OZ SS</td></tr>
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DATE	SAMPLE	TEST RESULT	TEST	APPROVAL
980526	S-25	PASS	H.C.LIOU	MAX LIN
990526	S-25-24	PASS	H.C.LIOU	MAX LIN

PREVIOUS